AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method for operating a system according to TDMA (Time Division Multiple Access) with a ~~multiplicity~~ fixed quantity n of wireless sensors and/or actuators as nodes (S.1...S.n) and a base station (BS), wherein n is any positive integer, said system being installed in a machine or installation, such as industrial robots or an automated manufacturing or production unit,

a) wherein ~~whereby~~ cyclical TDMA data transmission blocks are transmitted and each TDMA data transmission block is composed of consecutive time slots,

b) wherein ~~whereby~~ each time slot is allocated to a specific node,

c) wherein [[the]] uplink signals (UL.1...UL.n) can be transmitted from the different nodes (S.1...S.n) to the base station (BS) simultaneously on at least two~~, three or more~~ different frequencies (f1, f2,...f3),

d) wherein [[whereas the]] downlink signals (DL) are transmitted from the base station (BS) to the different nodes (S.1...S.n) on only one frequency, which differs from the uplink frequencies, and

e) wherein ~~whereby~~ the time slots and the different uplink frequencies of the different nodes are defined once and are thereafter retained.

2. (Currently Amended) The method ~~Method~~ according to Claim 1, wherein the different uplink frequencies of the different sensors and/or actuators (S.1...S.n) and the

downlink frequency are defined in such a way that interferences are avoided ~~as far as possible~~.

3. (Currently Amended) The method ~~Method~~ according to Claim 1 wherein [[the]] a frequency hopping method is used.

4. (Currently Amended) A system ~~System~~ with a multiplicity of wireless sensors and/or actuators as nodes (S.1...S.n) and a base station (BS), which is installed in a machine or installation, such as industrial robots or an automated manufacturing or production unit, ~~whereby cyclical TDMA data transmission blocks are transmitted between the base station and the nodes and between the nodes and the base station, wherein the uplink signals (UL.1...UL.n) can be transmitted from the different nodes (S.1...S.n) to the base station (BS) simultaneously on two, three or more different frequencies (f1, f2, f3), whereas the downlink signals (DL) are transmitted from the base station (BSA) to the different nodes (S.1...S.n) on only one frequency, which differs from the uplink frequencies, whereby the time slots and the different uplink frequencies of the different nodes are defined once and are thereafter retained.~~

a) wherein the sensors have a sensor head which detects a sensor environment and the actuators have an actuator unit and a control unit to detect an actuator environment,

b) wherein cyclical TDMA data transmission blocks are transmitted and each TDMA data transmission block is composed of consecutive time slots,

c) wherein each time slot is allocated to a specific node,

d) wherein the base station receives uplink signals that comprise sensor signals from the sensors and signals indicating the current status of actuators,

e) wherein the uplink signals (UL.1...UL.n) can be transmitted from the different nodes (S.1...S.n) to the base station (BS) simultaneously on at least two different frequencies (f1, f2,...f3),

f) wherein the downlink signals (DL) are transmitted from the base station (BS) to the different nodes (S.1...S.n) on only one frequency, which differs from the uplink frequencies,

g) wherein the downlink signals comprise control signals to activate/deactivate the actuators and signals to set specific parameters of the actuators sensors,

h) wherein the time slots and the different uplink frequencies of the different nodes are defined once and are thereafter retained, so that the receiver of the base station (BS) can identify the relevant sensor/actuator node (S.1...S.n) from the number and frequency allocated to each time slot.

5. (New) The method according to Claim 1, wherein the sensors have a sensor head which detects the sensor environment and the actuators have an actuator unit and a control unit to detect the sensor environment.

6. (New) The method according to Claim 1, wherein the base station receives uplink signals that comprise sensor signals from the sensors and signals indicating the current status of actuators.

7. (New) The method according to Claim 1, wherein the downlink signals comprise control signals to activate and deactivate the actuators and sensors and to set specific parameters of the actuators and sensors, respectively.

8. (New) The method according to Claim 1, wherein the time slots and the different uplink frequencies of the different nodes are defined once and are thereafter retained so that the receiver of the base station (BS) can identify the relevant sensor and actuator node (S.1…S.n) from the number and frequency allocated to each time slot.

9. (New) A method for operating a system according to TDMA (Time Division Multiple Access) with a fixed quantity n of wireless sensors and/or actuators as nodes (S.1...S.n) and a base station (BS), wherein n is any positive integer, said system being installed in a machine or installation, such as industrial robots or an automated manufacturing or production unit,

a) wherein the sensors have a sensor head which detects the sensor environment and the actuators have an actuator unit and a control unit to detect the sensor environment,

b) wherein cyclical TDMA data transmission blocks are transmitted and each TDMA data transmission block is composed of consecutive time slots,

c) wherein each time slot is allocated to a specific node,

d) wherein the base station receives uplink signals that comprise sensor signals from the sensors and signals indicating the current status of actuators,

e) wherein uplink signals (UL.1...UL.n) can be transmitted from the different nodes (S.1...S.n) to the base station (BS) simultaneously on at least two different frequencies (f1, f2,…f3),

f) wherein downlink signals (DL) are transmitted from the base station (BS) to the different nodes (S.1...S.n) on only one frequency, which differs from the uplink frequencies,

g) wherein the downlink signals comprise control signals to activate and deactivate the actuators and sensors and to set specific parameters of the actuators and sensors, and

h) wherein the time slots and the different uplink frequencies of the different nodes are defined once and are thereafter retained so that the receiver of the base station (BS) can identify the relevant sensor and actuator node (S.1...S.n) from the number and frequency allocated to each time slot.